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| **Unit Title:** Problem Solving withAddition and Subtraction | **Pacing (Duration of Unit):** 10 weeks |

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| **Desired Results** |

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| **Transfer Goals (**Priority practice standards in **bold)** |
| *Students will be able to independently use their learning to:*   1. **Make sense of problems and persevere in solving them.** 2. **Reason abstractly and quantitatively.** 3. **Construct viable arguments and critique the reasoning of others.** 4. **Model with mathematics.** 5. **Use appropriate tools strategically.** 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. |

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| **Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)** |

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| **Prerequisite Standards:**   * K.OA.2: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. * K.NBT.1: Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. * K.MD.3: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. | **WIDA for English Language Learners**  Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting  Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**  In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports. |
| **Standards (**Priority Standards in **bold):**   * 1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. * **1.OA.2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.** * 1.OA.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). * **1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:**   + **1.NBT. 2a: 10 can be thought of as a bundle of ten ones—called a “ten.”**   + **1.NBT.2b: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.**   + **1.NBT.2c: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).** * 1.NBT.4: Add within 100, including adding a two-digit number and a one-digit number, and adding a two- digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. * **1.NBT.5: Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.** * **1.NBT.6: Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.** |  |

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| **Meaning (\*Mostly assessed through Performance Tasks/Assessments)** |

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| **Big Ideas:** (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)   * The whole number system describes place value relationships within and beyond 100, and we use this system to solve problems with numbers. * Number relationships can be used to solve addition and subtraction problems. | **Essential Questions:** (Questions which frame ongoing and important inquires about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)   * Can numbers always be related to tens? * How does a position of a digit affect its value? * What strategies can we use to solve word problems? |

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| **Acquisition (\*Mostly assessed through traditional summative assessments)** | |
| **Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.  *Students will know …*   * That numerical data can be sorted, organized, represented, and interpreted. * That any number can be represented using tens and ones. * That addition and subtraction and subtraction are opposites that have a relationship, and this relationship is used to solve problems.   **Key Academic Vocabulary:**   * Number sentence * Data * Sort * Category * Picture * Bar * Tally | **Skills:** The discrete skills and process students should be able to use independently.  *Students will be skilled at:*   * Collecting, organizing, and interpreting data. * Making models to solve word problems with up to three addends. * Composing numbers by modeling with manipulatives. * Explaining their reasoning when solving mental math problems * Explaining their reasoning when using concrete models and drawings. * Using addition and subtraction to find unknowns within 100. * Mentally adding ten more and ten less * Subtracting multiples of ten (range 10-90) |

**Resource Suggestions:**

**K-5 Math Resources** <http://www.k-5mathteachingresources.com/5th-grade-number-activities.html>

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| **Standard(s)** | **Link** |
| **1.NBT.4** | [**Adding 10s to a 2-Digit Number**](http://www.k-5mathteachingresources.com/support-files/adding-10s-to-a-2digit-number.pdf)  [**Sums of 90**](http://www.k-5mathteachingresources.com/support-files/sums-of-90.pdf)  [**Add and Subtract 10 on the Number Line**](http://www.k-5mathteachingresources.com/support-files/add-and-subtract-10-on-the-number-line.pdf)  [**What Number is...?**](http://www.k-5mathteachingresources.com/support-files/what-number-is.pdf)  [**Adding Sets of Ten**](http://www.k-5mathteachingresources.com/support-files/addingsetsof101.nbt4.pdf)  [**Sam's Base 10 Blocks**](http://www.k-5mathteachingresources.com/support-files/sams-base-10-blocks.pdf)  [**Adding 2 Digit and One Digit Numbers**](http://www.k-5mathteachingresources.com/support-files/adding2digandonedignos1nbt4.pdf)  [**Addition Split (2 digit + multiple of 10)**](http://www.k-5mathteachingresources.com/support-files/addition-split.pdf)  [**Lucky Six**](http://www.k-5mathteachingresources.com/support-files/Lucky-Six.pdf) |
| **1.NBT.5** | [**Ten More**](http://www.k-5mathteachingresources.com/support-files/tenmore1.pdf)  [**Race Around (-10) Ver.1**](http://www.k-5mathteachingresources.com/support-files/race-around-minus10-ver1.pdf)  [**Race Around (-10) Ver.2**](http://www.k-5mathteachingresources.com/support-files/race-around-minus10-ver2.pdf) |
| **1.NBT.6** | [**Subtracting Sets of Ten**](http://www.k-5mathteachingresources.com/support-files/subtractingsetsof101.nbt5.pdf)  [**Subtracting Multiples of Ten**](http://www.k-5mathteachingresources.com/support-files/subtractingmultiplesof101.nbt6.pdf) |

**Technology (VIDEOS)**

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| **STANDARD** | **LINK** |
| **1.NBT.4** | <http://www.khanacademy.org/math/early-math/cc-early-math-add-sub-topic/cc-early-math-add-subtract-100> |
| **1.NBT.5** | <http://www.khanacademy.org/math/early-math/cc-early-math-place-value-topic/cc-early-math-tens> |
| **1.NBT.6** | <http://www.khanacademy.org/math/early-math/cc-early-math-place-value-topic/cc-early-math-tens> |

**enVision Math**

Lessons 7-1, 7-2 (Teen numbers)

Topic 8 (ALL - tens and ones)

Lesson 9-1 (10 more or 10 less)

Lesson 10-1 (adding groups of ten)

Lesson 11-1 (subtracting groups of ten)

Lesson 11-3 (subtracting tens from 2-digit numbers)